

WHAT IS CLAIMED IS:

1. A method for correcting ICs inclination on a semiconductor wafer, comprising:

recognizing a first detection point for

recognition and a second detection point for recognition on the semiconductor wafer by moving an image pickup camera along mutually orthogonal X and Y directions;

correcting an inclination of all ICs on the semiconductor wafer with respect to the X and Y directions by turning the semiconductor wafer on a basis of a result of the recognition instead of correcting an inclination for each of the ICs on the semiconductor wafer.

2. The IC inclination correction method according to claim 1, wherein, when the first detection point for recognition deviates within a deviation area beyond a view field of the image pickup camera, the first detection point for recognition is detected by moving the view field of the image pickup camera in a serpentine manner in the X and Y directions within the deviation area starting from one point among four corners of the deviation area.

3. The IC inclination correction method according to claim 1, wherein, when the first detection point for recognition deviates within a deviation area beyond a view field of the image pickup camera, the first detection point for recognition is detected by moving the view field of the

image pickup camera spirally in the X and Y directions within the deviation area starting from a center in the deviation area.

4. The IC inclination correction method according to
5 claim 2, wherein each quantity of the movements in the X
and Y directions of the view field of the image pickup
camera is 1/3 a length with respect to the X and Y
directions of the view field.

5. The IC inclination correction method according to
10 claim 3, wherein each quantity of the movements in the X
and Y directions of the view field of the image pickup
camera is 1/3 a length with respect to the X and Y
directions of the view field.

6. The IC inclination correction method according to
15 claim 1, further comprising:

recognizing a detection point for inclination
correction which is included in the view field of the image
pickup camera together with the first detection point for
recognition in addition to the recognition of the first
20 detection point for recognition;

obtaining a rough inclination of the ICs on the
basis of the recognition of the first detection point for
recognition and the detection point for inclination
correction; and

25 recognizing the second detection point for

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recognition by moving the image pickup camera on the basis of the rough inclination.

7. The IC inclination correction method according to claim 3, further comprising:

5 recognizing a detection point for inclination correction which is included in the view field of the image pickup camera together with the first detection point for recognition in addition to the recognition of the first detection point for recognition;

10 obtaining a rough inclination of the ICs on a basis of the recognition of the first detection point for recognition and the detection point for inclination correction; and

15 recognizing the second detection point for recognition by moving the image pickup camera on a basis of the rough inclination.

8. An apparatus for correcting ICs inclination on a semiconductor wafer which comprises:

20 a recognition device which includes an image pickup camera freely movable in mutually orthogonal X and Y directions above the semiconductor wafer for imaging a first detection point for recognition and a second detection point for recognition on the semiconductor wafer, and detects an inclination of ICs on the semiconductor
25 wafer with respect to the X and Y directions on a basis of

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pickup image information obtained by the image pickup camera;

a wafer turning member on which the semiconductor wafer is loaded and which is turned in a circumferential direction of the loaded semiconductor wafer;

5 a turning device for turning the wafer turning member in the circumferential direction; and

10 a control device for controlling to drive the turning device on the basis of inclination information of the ICs detected by the recognition device so as to turn the semiconductor wafer loaded on the wafer turning member in order to correct the inclination of all ICs on the semiconductor wafer instead of correcting an inclination for each of the ICs on the semiconductor wafer.

15 9. The IC inclination correcting apparatus according to claim 8, wherein, when the first detection point for recognition deviates within a deviation area beyond a view field of the image pickup camera, the control device controls to drive the recognition device to detect the first detection point for recognition by moving the view field of the image pickup camera in a serpentine manner in the X and Y directions within the deviation area starting from one point among four corners of the deviation area.

20 10. The IC inclination correcting apparatus method according to claim 8, wherein, when the first detection

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point for recognition deviates within a deviation area beyond a view field of the image pickup camera, the control device controls to drive the recognition device to detect the first detection point for recognition by moving the
5 view field of the image pickup camera spirally in the X and Y directions within the deviation area starting from a center in the deviation area.

11. The IC inclination correcting apparatus according to claim 9, wherein the control device defines each quantity of the movements in the X and Y directions of the view field of the image pickup camera to be 1/3 a length with respect to the X and Y directions of the view field.
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12. The IC inclination correcting apparatus according to claim 10, wherein the control device defines each quantity of the movements in the X and Y directions of the view field of the image pickup camera to be 1/3 a length with respect to the X and Y directions of the view field.
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13. The IC inclination correcting apparatus according to claim 8, wherein the control device controls to drive the recognition device to recognize not only the first detection point for recognition, but a detection point for inclination correction which is included in the view field of the image pickup camera together with the first detection point for recognition, to obtain a rough
20 inclination of the ICs based on the first detection point
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for recognition and the detection point for inclination correction, and to detect the second detection point for recognition by moving the image pickup camera based on the rough inclination.

5 14. The IC inclination correcting apparatus according to claim 9, wherein the control device controls to drive the recognition device to recognize not only the first detection point for recognition, but a detection point for inclination correction which is included in the view field of the image pickup camera together with the first detection point for recognition, to obtain a rough inclination of the ICs based on the first detection point for recognition and the detection point for inclination correction, and to detect the second detection point for recognition by moving the image pickup camera based on the rough inclination.

10 15. The IC inclination correcting apparatus according to claim 10, wherein the control device controls to drive the recognition device to recognize not only the first detection point for recognition, but a detection point for inclination correction which is included in the view field of the image pickup camera together with the first detection point for recognition, to obtain a rough inclination of the ICs based on the first detection point for recognition and the detection point for inclination

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correction, and to detect the second detection point for recognition by moving the image pickup camera based on the rough inclination.